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| 09/981,587      | 10/17/2001  | Nayan H. Joshi       | ATOTP0100US         | 7222             |

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10/08/2002

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EXAMINER

BARR, MICHAEL E

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1762

24

DATE MAILED: 10/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/981,587

Applicant(s)

JOSHI, NAYAN H.

Examiner

Michael Barr

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The limitation of Claim 9 that the conditioner further contains a complexing agent is not described in the specification.

### *Claim Objections*

2. Claim 7 is objected to because of the following informalities: Claim 7 does not end with a period. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 1-6 and 10-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Izaki et al.

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Izaki et al. teaches a method of forming a conductive metal layer on a non-conductive substrate (plastic/composite) by cleaning/modifying the substrate with a solution, which would have contained a solvent, then conditioning the substrate with a condition containing a cationic surfactant, sensitizing the substrate with a solution of  $\text{SnCl}_2$ , then activating the surface with a silver salt ( $\text{AgNO}_3$ ) solution having a pH in the claimed range, and then electrolessly plating the substrate with an electroless nickel or copper plating solution having a pH in the claimed range, where the concentration of  $\text{SnCl}_2$  and silver salt are within the claimed range (Col. 4, line 48-Col. 5, line 49; Col. 6, lines 16-28; Example 1). The silver salt activator solution of Izaki et al. does not contain any palladium and Izaki et al. shows that the electroless nickel plating solution does not use formaldehyde.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izaki et al. as applied to claim 5 above, and further in view of Pendleton.

Izaki et al. does not teach that the conditioner contains a reducing agent. Pendleton teaches conditioning a non-conductive plastic substrate for metal plating, where the conditioner contains a reducing agent in the form of an acid salt (Col. 7, lines 35-54; Col. 9, lines 28-40). It would have been obvious to one skilled in the art to include a reducing agent, such as that of

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Pendleton, in the conditioner of Izaki et al., with the expectation of providing the desired substrate conditioning and preparation for metal plating, since the same is conventional in the art for conditioners used to prepare non-conductive plastic substrates for metal plating, as shown by Pendleton, and as desired by Izaki et al.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Izaki et al. as applied to claim 5 above, and further in view of Stamp et al.

Izaki et al. does not teach that the conditioner contains a complexing agent. Stamp et al. teaches conditioning a non-conductive plastic substrate for metal plating, where the conditioner contains a complexing agent (Col. 8, lines 31-50; Col. 11, lines 1-8). It would have been obvious to one skilled in the art to include a complexing agent, in the conditioner of Izaki et al., with the expectation of providing the desired substrate conditioning and preparation for metal plating, since the same is conventional in the art for conditioners used to prepare non-conductive plastic substrates for metal plating, as shown by Stamp et al., and as desired by Izaki et al.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Stevenson and Pizzio are cited as prior art of interest.

Stevenson teaches electroless plating of a non-conducting substrate by sensitizing with a tin salt and then activating with a silver salt.

Pizzio teaches electroless plating of a non-conducting substrate by activating with a silver salt.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Barr whose telephone number is 703-305-7919. The examiner can normally be reached on Monday-Thursday 6:00 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on 703-308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 or 703-305-5408 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Michael Barr  
Primary Examiner  
Art Unit 1762

MB  
October 3, 2002